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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
ABEL JALIL, NEVEEN	

ART UNIT	PAPER NUMBER
2165	

DATE MAILED: 03/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Supplemental Notice of Allowability	Application No.	Applicant(s)	
	09/995,966	CHENAULT, JOHN	
	Examiner	Art Unit	
	Neveen Abel-Jalil	2165	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *November 24, 2004*.

2. ☒ The allowed claim(s) is/are *1-3,24-35,37 and 39-63*.

3. ☒ The drawings filed on *28 November 2001* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

C. Rones

CHARLES RONES
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

Remarks

1. In response to Attorney of Record's telephone request on February 4, 2005 to correct a typo in the Examiner's Answer, hereby a supplemental Examiner's Answer/Allowance is attached.

2. In response to the after-final amendment field on October 25, 2004, claims 4-23, 36, and 38, have been cancelled. Claims 39-63 have been newly added. Therefore, claims 1-3, 24-35, 37, and 39-63 are now pending.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Steven D. Lawrenz (Attorney of Record) on January 4, 2005, and again on February 4, 2005.

4. The application has been amended as follows:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listings of Claims:

Claim 1 (Original): A method in a computing system for updating the availability status attributed to predefined groups of offered items, comprising:

initializing a FIFO queue of item groups to be empty;

receiving a plurality of messages, each message identifying an offered item and indicating that the availability status of the identified item has changed;

in response to each received message:

identifying any item groups containing the identified item;

for each identified item group:

if the identified item group is not present in the queue of item groups, appending the item group to the queue;

when a timer expires:

for a predetermined number of item groups in the queue of item groups:

removing the item group from the queue of item groups;

updating the availability status attributed to the item group, based upon availability statuses of the items within the item group;

if, after removing the predetermined number of item groups, the queue of item groups is empty, setting a timer having a first duration; and

if, after removing the predetermined number of item groups, the queue of item groups is not empty, setting a timer having a second duration that is shorter than the first duration.

Claim 2 (Original): The method of claim 1 wherein the updating includes intersecting the availability statuses of the items within the item group.

Claim 3 (Original): The method of claim 1 wherein identifying any item groups containing the identified item includes accessing a list of item groups indexed by the items that they contain.

Claims 4-23 (Cancelled)

Claim 24 (Previously Presented): A method in a computing system for updating availability information for group items each containing one or more individual items, comprising:

detecting each of a plurality of changes to availability information of individual items;

in response to each detected change to availability information of an individual item:

identifying group items containing the individual item; and

for each of the identified group items, updating availability information of the identified group item using current availability information for each of the individual items contained by the identified group item,

wherein each of the following availability information items is updated in at least one of the identified group items:

a number of units available to sell in ~~the~~ a closest time bucket;

the identify of the closest time bucket in which units will be available to sell;

a range of error in the closest time bucket;

the source of the units that are available to sell;

whether units can be replenished if more are needed than are in a first time bucket;

a source from which units can be replenished if more are needed than are in the first time bucket;

a replenishment cycle for the item;

whether the item is suspended from sale; and

when stock in the item is expected to be exhausted.

Claim 25 (Original): The method of claim 24 wherein the detecting and identifying is performed in a first process, and wherein the updating is performed in a second process distinct from the first process.

Claim 26 (Original): The method of claim 24 wherein the detecting and identifying is performed by a first daemon, and wherein the updating is performed in a second daemon distinct from the first daemon.

Claim 27 (Original): The method of claim 24 wherein the detecting includes transmitting an asynchronous message for each detected change to availability information of an individual item.

Claim 28 (Original): The method of claim 27 wherein the identifying and updating is performed in response to receiving the transmitted asynchronous message.

Claim 29 (Original): The method of claim 24 wherein the detecting includes broadcasting to a plurality of recipients an asynchronous message for each detected change to availability information of an individual item.

Claim 30 (Original): The method of claim 24, further comprising adding the identified group items to a group item queue if not already present in the group item queue.

Claim 31 (Original): The method of claim 30 wherein availability information of group items in the group item queue is updated when a scheduling mechanism triggers the updating.

Claim 32 (Original): The method of claim 24 wherein the identifying and updating is performed immediately in response to the each detected change to availability information of an individual item.

Claim 33 (Original): The method of claim 24 wherein the identifying and updating is performed at a time later than each detected change to availability information of an individual item.

Claim 34 (Original): The method of claim 24 wherein the detecting includes receiving asynchronous messages each describing a cause for modifying availability information of an individual item.

Claim 35 (Original): The method of claim 24, further comprising, in response to a detected change to availability information of at least one individual item, for at least one of the group items identified as containing the individual item, transmitting an asynchronous message indicating the updated availability information for the group item.

Claim 36 (Cancelled)

Claim 37 (Original): The method of claim 24, further comprising broadcasting to a plurality of recipients an asynchronous message indicating the update of availability information for each of the identified group items whose availability information is updated.

Claim 38 (Cancelled)

Claim 39 (Previously Presented): A computer-readable medium whose contents cause a computing system to perform a method for updating the availability status attributed to predefined groups of offered items, the method comprising:

initializing a FIFO queue of item groups to be empty;

receiving a plurality of messages, each message identifying an offered item and indicating that the availability status of the identified item has changed;

in response to each received message:

identifying any item groups containing the identified item;

for each identified item group:

if the identified item group is not present in the queue of item groups, appending the item group to the queue;

when a timer expires:

for a predetermined number of item groups in the queue of item groups:

removing the item group from the queue of item groups;

updating the availability status attributed to the item group, based upon availability statuses of the items within the item group;

if, after removing the predetermined number of item groups, the queue of item groups is empty, setting a timer having a first duration; and

if, after removing the predetermined number of item groups, the queue of item groups is not empty, setting a timer having a second duration that is shorter than the first duration.

Claim 40 (Previously Presented): The computer-readable medium of claim 39 wherein the updating includes intersecting the availability statuses of the items within the item group.

Claim 41 (Previously Presented): The computer-readable medium of claim 39 wherein identifying any item groups containing the identified item includes accessing a list of item groups indexed by the items that they contain.

Claim 42 (Previously Presented): A computing system for updating the availability status attributed to predefined groups of offered items, comprising:

an initialization subsystem that initializes a FIFO queue of item groups to be empty;

a receiving subsystem that receives a plurality of messages, each message identifying an offered item and indicating that the availability status of the identified item has changed;

a message processing subsystem that, in response to each received message:

identifies any item groups containing the identified item;

for each identified item group:

if the identified item group is not present in the queue of item groups, appends the item group to the queue;

a timer; and

a queue processing subsystem that,

when a timer expires:

for a predetermined number of item groups in the queue of item groups:

removes the item group from the queue of item groups;

updates the availability status attributed to the item group, based upon availability statuses of the items within the item group;

if, after removing the predetermined number of item groups, the queue of item groups is empty, sets a timer having a first duration; and

if, after removing the predetermined number of item groups, the queue of item groups is not empty, sets a timer having a second duration that is shorter than the first duration.

Claim 43 (Previously Presented): The computing system of claim 42 wherein the updating performed by the queue processing subsystem includes intersecting the availability statuses of the items within the item group.

Claim 44 (Previously Presented): The computing system of claim 42 wherein the identification of any item groups containing the identified item performed by the message processing subsystem includes accessing a list of item groups indexed by the items that they contain.

Claim 45 (Previously Presented): A computer-readable medium whose contents cause a computing system to perform a method for updating availability information for group items each containing one or more individual items, the method comprising:

detecting each of a plurality of changes to availability information of individual items;

in response to each detected change to availability information of an individual item:

identifying group items containing the individual item; and

for each of the identified group items, updating availability information of the identified group item using current availability information for each of the individual items contained by the identified group item,

wherein each of the following availability information items is updated in at least one of the identified group items:

a number of units available to sell in a closest time bucket;

the identify of the closest time bucket in which units will be available to sell;

a range of error in the closest time bucket;

the source of the units that are available to sell;

whether units can be replenished if more are needed than are in a first time bucket;

a source from which units can be replenished if more are needed than are in the first time bucket;

a replenishment cycle for the item;

whether the item is suspended from sale; and

when stock in the item is expected to be exhausted.

Claim 46 (Previously Presented): The computer-readable medium of claim 45 wherein the detecting and identifying is performed in a first process, and wherein the updating is performed in a second process distinct from the first process.

Claim 47 (Previously Presented): The computer-readable medium of claim 45 wherein the detecting and identifying is performed by a first daemon, and wherein the updating is performed in a second daemon distinct from the first daemon.

Claim 48 (Previously Presented): The computer-readable medium of claim 45 wherein the detecting includes transmitting an asynchronous message for each detected change to availability information of an individual item.

Claim 49 (Previously Presented): The computer-readable medium of claim 45 wherein the identifying and updating is performed in response to receiving the transmitted asynchronous message.

Claim 50 (Previously Presented): The computer-readable medium of claim 45 wherein the detecting includes broadcasting to a plurality of recipients an asynchronous message for each detected change to availability information of an individual item.

Claim 51 (Previously Presented): The computer-readable medium of claim 45, the method further comprising adding the identified group items to a group item queue if not already present in the group item queue.

Claim 52 (Previously Presented): The computer-readable medium of claim 51 wherein availability information of group items in the group item queue is updated when a scheduling mechanism triggers the updating.

Claim 53 (Previously Presented): The computer-readable medium of claim 45 wherein the identifying and updating is performed immediately in response to the each detected change to availability information of an individual item.

Claim 54 (Previously Presented): The computer-readable medium of claim 45 wherein the identifying and updating is performed at a time later than each detected change to availability information of an individual item.

Claim 55 (Previously Presented): The computer-readable medium of claim 45 wherein the detecting includes receiving asynchronous messages each describing a cause for modifying availability information of an individual item.

Claim 56 (Previously Presented): The computer-readable medium of claim 45, the method further comprising, in response to a detected change to availability information of at least one individual item, for at least one of the group items identified as containing the individual item, transmitting an asynchronous message indicating the updated availability information for the group item.

Claim 57 (Previously Presented): The computer readable medium of claim 45, the method further comprising broadcasting to a plurality of recipients an asynchronous message indicating the update of availability information for each of the identified group items whose availability information is updated.

Claim 58 (Currently Amended): A computing system for updating availability information for group items each containing one or more individual items, comprising:

a detection subsystem that detects each of a plurality of changes to availability information of individual items;

an updating subsystem that, in response to each detected change to availability information of an individual item:

identifies group items containing the individual item; and

for each of the identified group items, ~~updating~~ updates availability information of the identified group item using current availability information for each of the individual items contained by the identified group item,

wherein each of the following availability information items is updated in at least one of the identified group items:

a number of units available to sell in a closest time bucket;

the identify of the closest time bucket in which units will be available to sell;

a range of error in the closest time bucket;

the source of the units that are available to sell;

whether units can be replenished if more are needed than are in a first time bucket;

a source from which units can be replenished if more are needed than are in the first time bucket;

a replenishment cycle for the item;

whether the item is suspended from sale; and

when stock in the item is expected to be exhausted.

Claim 59 (Previously Presented): The computing system of claim 58 wherein the detecting performed by the detection subsystem includes transmitting an asynchronous message for each detected change to availability information of an individual item.

Claim 60 (Previously Presented): The computing system of claim 59 wherein the identifying and updating is performed in response to receipt of transmitted asynchronous message by the detection subsystem

Claim 61 (Previously Presented): The computing system of claim 58, further comprising a group item queue to which the updating subsystem adds the identified group items if not already present in the group item queue.

Claim 62 (Previously Presented): The computing system of claim 58, further comprising a transmission subsystem that, in response to a detected change to availability information of at least one individual item, for at least one of the group items identified as containing the individual item, transmits an asynchronous message indicating the updated availability information for the group item.

Claim 63 (Previously Presented): The computing system of claim 58, further comprising a broadcasting subsystem that broadcasts to a plurality of recipients an asynchronous message indicating the update of availability information for each of the identified group items whose availability information is updated.

Reasons for Allowance

5. Claims 1-3, 24-35, 37, and 39-63 are allowed over the prior art made of record.

6. The following is a statement of reasons for allowance:

The prior art of record (Kumar et al. -U.S. Pub. No. 2002/0042756 A1- and Knorr et al. -U.S. Pub. No. 2002/0077929 A1- and Lin et al. –U.S. Pub. No. 2002/0077919 A1) do not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim), initializing a FIFO queue of item groups to be empty; receiving a plurality of messages, each message identifying an offered item and indicating that the availability status of the identified item has changed; in response to each received message: identifying any item groups containing the identified item; for each identified item group: if the identified item group is not present in the queue of item groups, appending the item group to the queue, as claimed in Indepedent claims 1, 39, and 42, in conjunction with remaining claims provisions.

Claims 2-3, 40-41, and 43-44 are allowed over the prior art made of record, because they are dependent from the allowed independent claims 1, 39, and 42, respectively.

The prior art of record (Kumar et al. -U.S. Pub. No. 2002/0042756 A1- and Knorr et al. -U.S. Pub. No. 2002/0077929 A1- and Lin et al. –U.S. Pub. No. 2002/0077919 A1) do not disclose, teach, or suggest the claimed limitations of (in combination with all other features in the claim), detecting each of a plurality of changes to availability information of individual items; in response to each detected change to availability information of an individual item: identifying group items containing the individual item; and for each of the identified group items, updating availability information of the identified group item using current availability

information for each of the individual items contained by the identified group item, as claimed in Indepedent claims 24, 45, and 58, in conjunction with remaining claims provisions.

Claims 25-35, 37, 46-57, and 59-63, are allowed over the prior art made of record, because they are dependent from the allowed independent claims 24, 45, and 58, respectively.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Neveen Abel-Jalil whose telephone number is 571-272-4074. The examiner can normally be reached on 8:30AM-5: 30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici can be reached on 571-272-4038. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Neveen Abel-Jalil
February 4, 2005

C. Rones

CHARLES RONES
PRIMARY EXAMINER